
STATEMENT OF WORK

MULTIFUNCTIONAL INFORMATION DISTRIBUTION SYSTEM JOINT TACTICAL RADIO SYSTEM

MIDS JTRS PRODUCTION

**Revision 0
August 2019**

1.0 SCOPE

This Statement of Work (SOW) defines the contractor tasks required for the production and delivery of the Multifunctional Information Distribution System (MIDS) Joint Tactical Radio System (JTRS). The SOW includes the associated program management, engineering support, configuration and data management, logistics support and manufacturing requirements. The MIDS JTRS is comprised of a Receiver Transmitter (RT) and a Power Supply (PS) Line Replaceable Unit (LRU), along with the Computer Software Configuration Items (CSCIs) that comprise the Operating Environment (OE) as well as the Link 16 and Tactical Air Navigation (TACAN) Waveforms, herein after referred to as the Terminal. Each RT LRU is comprised of several Shop Replaceable Units (SRUs) which, along with the Terminal LRUs, may be procured separately as spares. This SOW requires the contractor to manufacture and deliver various MIDS JTRS Terminals, to include Concurrent Multi-Netting 4 (CMN-4), Tactical Targeting Network Technology (TTNT) and F-22 configurations. Spare LRUs and SRUs are also to be manufactured and delivered within this SOW.

The data to be delivered as a result of performing the tasks prescribed by this SOW are specified in the Contract Data Requirements List (CDRL).

2.0 APPLICABLE DOCUMENTS

The following documents of the exact issue shown form a part of this SOW to the extent specified herein. In the event of conflict between the documents referenced herein and the contents of this SOW, the SOW is the overarching document. For the specifications and references shown below without a release date or version number, this SOW assumes the latest issue at the time of this Request For Proposal (RFP) is issued form a part of this SOW to the extent specified herein.

2.1 Specifications

TSRD No. 04-10 6 December 2004	Telecommunications Security Requirements Document (TSRD) for the MIDS JTRS
DoD 4650.1-1R 26 April 2005	Link 16 Electromagnetic Compatibility (EMC) Features Certification Process and Requirements

2.2 Standards

ANSI Z400.1-2004 31 March 2004	Hazardous Industrial Chemicals – Material Safety Data Sheets
ANSI/EIA-632-1999 January 1999	Processes for Engineering a System
ANSI EIA-649C 407 February 2019	Configuration Management Standard
ANSI/J-STD-001 Revision D February 2005	Requirements for Soldered Electrical and Electronic Assemblies
AQAP-2110 Edition 3 November 2009	NATO Quality Assurance Requirements for Design, Development and Production
AQAP-2120 Edition 3 November 2009	NATO Quality Assurance Requirements for Production
AQAP-2130 Edition 3 November 2009	NATO Quality Assurance Requirements for Inspection and Test
AQAP-2210 Edition 1 November 2006	NATO Supplementary Software Quality Assurance Requirement
FED-STD-313D 3 April 1996 Notice 1 21 March 2000	Material Safety Data, Transportation Data, and Disposal Data for Hazardous Materials Furnished to Government Activities

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GEIA-STD-0005-1 15 June 2006	Performance Standard for Aerospace and High Performance Electronic Systems Containing Lead-free Solder
GEIA-STD-0005-2 1 June 2006	Standard for Mitigating the Effects of Tin Whiskers in Aerospace and High Performance Electronic Systems
IEEE/EIA 12207-2008 1 Feb 2008	Systems and Software Engineering – Software Life Cycle Processes
IPC-A-600 Revision H April 2010	Acceptability of Printed Circuit Boards (PCBs)
IPC-A-610 Revision E April 2010	Acceptability of Electronic Assemblies
IPC-7711/7721 Revision B November 2007	Rework, Modification and Repair of Electronic Assemblies
ISO 9001-2008 15 November 2008	Quality Systems – Model for Quality Assurance in Design/Development, Production, Installation and Servicing
ISO/IEC 90003:2004 11 February 2004	Software Engineering - Guidelines for the Application of ISO 9001:2000 to Computer Software
ISO 10012:2003 14 April 2003	Measurement management systems – Requirements for measurement processes and measuring equipment
MIL-STD-196F 11 September 2013	Joint Electronics Type Designation Automated System
MIL-STD-461E 20 August 1999	Requirements for the Control of Electromagnetic Interference Characteristics of Subsystems and Equipment
MIL-STD-1686C 25 October 1995	Electrostatic Discharge Control Program for Production of Electrical and Electronic Parts, Assemblies, and Equipment
STANAG 4107 Edition 8 July 2007	Mutual Acceptance of Government Quality Assurance and Usage of the Allied Quality Assurance Publications
STANAG 4175 Edition 3 February 2001	Technical Characteristics of the MIDS
STANAG 5516 Edition 3 February 2006	Tactical Data Exchange – Link-16

2.3 Handbooks

GEI-HB-649A November 2015	Configuration Management Standard Implementation Guide
MIL-HDBK-217F 2 December 1991 Notice 1 10 July 1992 Notice 2 28 February 1995	Reliability Prediction of Electronic Equipment
MIL-HDBK-263B 31 July 1994	Electrostatic Discharge, Control Handbook for Protection of Electrical and Electronic Parts Assemblies and Equipment
MIL-HDBK-472 24 May 1966 Notice 1 12 January 1984	Maintainability Prediction

2.4 Other Documents

PLAN-J-00001 Revision D 15 May 2010	Configuration and Data Management Plan for Multifunctional Information Distribution System Joint Tactical Radio System (MIDS JTRS)
C-M(55) 15(Final)	Security within the North Atlantic Treaty Organization
JTRS CAPSTONE UPA JTRS-UPA-022-06	User Partnership Agreement between the National Security Agency Information Assurance Directorate and the Joint Program Executive Office Joint Tactical Radio System Concerning the Security Aspects of the Joint Tactical Radio System and Associated Programs
MSRC-5000SCA V2.2 November 17, 2001	Software Communications Architecture Specification
Rev 1.9.1 08 December 2008	Joint Program Executive Office Joint Tactical Radio System ICWG Approved JTRS Standards
Rev 1.9.1 03 June 2009	Joint Program Executive Office Joint Tactical Radio System Standards Standardization Plan

3.0 REQUIREMENTS

3.1 General

3.1.1 Responsibilities

The contractor shall build, test and deliver the following MIDS JTRS Terminals, LRUs, and SRUs that conform to the requirements established in the Index and Data Lists per Table 1 below:

Table 1

Configuration	
MIDS JTRS Concurrent Multi-Netting with Concurrent Contention Receive (CMN-4) Terminal	MIDS JTRS (5)
MIDS JTRS Tactical Targeting Network Technology (TTNT)	MIDS JTRS (6/7)
MIDS JTRS F-22 Terminal	MIDS JTRS (8)

For the purposes of this SOW, CMN-4, TTNT and F-22 terminals are hereafter referred to as MIDS JTRS Terminals.

3.1.2 Security

The work to be performed includes access up to SECRET for data, information, and spaces. The contractor will be required to attend meetings classified up to the SECRET level. The contractor shall perform all work in accordance with DoD and Navy Operations Security (OPSEC) requirements and in accordance with the OPSEC attachment to the DD254. The Contractor's Facility Security Officer is required to ensure all personnel who access NATO material are briefed and granted access into the NATO Program. This information must be entered into the Joint Personnel Adjudication System (JPAS). The NIWC Pacific NATO Control Officer/Alternate has reviewed the requirement supporting this contractual obligation and has approved the review/release of the following NATO documents:

- STANAG 4107 – Mutual Acceptance of Government Quality Assurance and Usage of the Allied Quality Assurance Publications
- STANAG 4175 – Technical Characteristics of the MIDS
- STANAG 5516 – Tactical Data Exchange – Link-16
- AQAP-2110 – NATO Quality Assurance Requirements for Design, Development and Production
- AQAP-2120 – NATO Quality Assurance Requirements for Production
- AQAP-2130 – NATO Quality Assurance Requirements for Inspection and Test
- AQAP-2210 – NATO Supplementary Software Quality Assurance Requirement

Note: In the event that subcontractor access to NATO documentation is needed on this

contract, approval from the NIWC Pacific NATO Control Officer/Alternate is required before access to any NATO documents is granted.

3.2 Program Management

3.2.1 Program Manager

The contractor shall designate a single program manager, who shall have overall responsibility for control and coordination of all work performed. This manager shall act as the single focal point within the contractor's activity for all program status information.

3.2.2 Program Planning and Control

The contractor shall identify, plan, organize, direct, coordinate and control the activities necessary to accomplish all contract requirements. In the performance of this task, the contractor shall establish, maintain, and use a management control system that provides for the planning and control of cost, measurement of performance (value for completed tasks), and generation of timely and reliable information for reporting requirements established herein. The contractor shall establish a formal organization responsible for accomplishing the tasks established in this SOW. The contractor shall ensure that all requirements of this SOW and the CDRL are adhered to by the contractor and its subcontractors. A clear line of project authority shall exist between all organizational elements and the program manager. The contractor shall identify one or more positions or elements within the contractor's and subcontractors' organizations against each SOW task that will perform the corresponding work. The contractor shall identify and maintain a list of key personnel who have management and task accomplishment responsibility, including the key personnel of the major subcontractors. The contractor shall ensure expeditious transfer of appropriate technical data among subcontractors, the other contractor and any associate contractors.

3.2.3 Program Schedule

The contractor shall prepare and maintain a master schedule of program events. Back-up schedules detailing the sub-events required to achieve milestones in the master schedule shall also be prepared and maintained. Schedules shall be updated weekly and augmented with an explanation addressing all updates. The contractor shall address the effect on interrelated milestones. The status of program schedules shall be presented during each Program Management Review (PMR) and each Program Management Status Teleconference.

3.2.4 Risk Assessment and Management

The MIDS Program Office has selected the U.S. Navy's Program Managers WorkStation (PMWS) tool Technical Risk Identification and Mitigation System (TRIMS) as its risk management tool. The MIDS Program Office (MPO) will conduct a process-oriented technical risk management program utilizing TRIMS. The contractor shall support annual site risk assessments of the contractor and its subcontractors, as determined by the Government, to update TRIMS baseline files and reassess program risks. The contractor shall provide the Government with an analysis of the potential effects on cost and

schedule, as well as proposed mitigation plans of all red and yellow (high and medium risk, respectively) TRIMS templates and shall close all resulting action items within sixty (60) days of each assessment. The contractor shall prepare a Risk Assessment in accordance with the Risk Management Plan for the MIDS JTRS Production Program. The contractor's risk assessment shall be presented at each PMR.

3.2.5 Program Management Reviews

The contractor shall conduct and administratively support PMRs every four (4) months. All PMRs shall be held at the contractor's or a subcontractor's facility unless the Government directs an alternate location for efficiency of schedule or travel cost. The contractor shall provide both wired and wireless Internet connectivity to the attendees. Wired Internet connections shall be limited to no more than 25% of the attendees.

3.2.5.1 Content

The contractor shall develop agendas and provide minutes for the PMRs. The PMR agendas shall include the PMR items identified in Appendix A, at a minimum. The Government shall have the option to modify or add items to the PMR agenda. At the PMRs, the contractor shall report detailed program status information, linked to the SOW and the CDRL, including subcontractor work.
(CDRL A001, A002, A003)

3.2.6 Program Management Status Teleconferences

The contractor shall support and participate in weekly Program Management Status Teleconferences. The contractor shall provide a slide by Close of Business (COB) on the first working day prior to each teleconference that includes the current status of all terminal production and depot repairs (warranty and non-warranty), schedules and metrics (to include failure reports, investigation reports and Engineering Change Proposal (ECP) status) for all related activities during these teleconferences. These teleconferences shall be no more than two (2) hours in duration each week.

3.2.7 Cost and Software Data Reporting

The Contractor shall use a documented standard Cost and Software Data Reporting (CSDR) process that satisfies the guidelines contained in the DoD 5000.04-M-1, CSDR Manual.

3.2.7.1 Contractor Cost Data Reporting (CCDR)

The Contractor shall:

- a. Use the Government-approved Contract Cost and Software Data Reporting (CSDR) Plan, DD Form 2794, and the related Resource Distribution Table (RDT) as the baseline for reporting provided as contract attachment (R);
- b. Prepare and deliver to the Government a Cost and Hour Report (FlexFile) (CDRL A004) for every indicated data element (Data Group B) within the Government-approved Contract CSDR Plan;

- c. Provide a Work Breakdown Structure (WBS) Dictionary and Remarks as a part of the FlexFile format (Data Group C) for every data element identified within the approved Contract CSDR Plan.
- d. Prepare and deliver to the Government a Quantity Data Report (CDRL A005) for every indicated data element (Data Group B) within the Government-approved Contract CSDR Plan;
- e. Prepare and deliver to the Government DD Form 1921-3 (CDRL A006);
- f. Provide updates to the Government-approved Contract CSDR Plan and related RDT for Government approval. Updates include: aligning reporting Subcontractor effort to a single WBS element and updating the RDT as new Subcontracts are awarded;
- g. Hold a post award meeting after contract award to include a discussion of the Contractor's standard cost and software data reporting process that satisfies the guidelines contained in the DoD 5000.04-M-1 (CSDR Manual) and the requirements in the Government-approved Contract CSDR Plan and related RDT.

3.2.7.2 Subcontractor Cost Data Reporting

The Contractor shall:

- a. Flow-down Contractor Cost and Software Data Reporting (CSDR) requirements to any Subcontracts valued over \$50 million or any Subcontracts valued between \$20 million and \$50 million that are designated by the Cost Working Integrated Product Team (CWIPT) as high risk, high value, or high technical interest;
- b. Notify the Government of any subcontractor changes or new subcontracts awarded for subcontracts that exceeds \$50 million;
- c. Flow-down DD Form 1921-3 (CDRL A006) to any Subcontractors required to submit Cost and Software Data Reporting.

(CDRL A004, A005, A006)

3.3 Engineering Support

3.3.1 Systems Engineering

3.3.1.1 Systems Engineering Management

The contractor shall perform systems engineering management activities in accordance with the Systems Engineering Management Plan (SEMP) for the MIDS JTRS, and shall conduct analysis to identify the engineering support functions and requirements needed to produce, accept, operate, and maintain the MIDS JTRS

Terminal configurations. The contractor shall adhere to those portions of the SEMP that apply to a production effort.

3.3.1.2 System Engineering Responsibilities

The contractor shall perform the following systems engineering tasks:

- a. Maintenance of the Product Baseline (PBL),
- b. Maintenance of LRU and SRU interchangeability,
- c. Designation of Hardware Configuration Items (HWCIs) and CSCIs, and
- d. Technical evaluation of Engineering Change Proposals (ECPs)

3.3.1.2.1 Maintenance of the PBL

The contractor shall maintain the PBL for each variant of the MIDS JTRS Terminal configuration. The contractor shall maintain the PBL only by incorporation of Engineering Change Orders (ECOs). These ECOs shall be (a) to incorporate Government approved Class I ECPs into the design of the Terminal configurations or (b) to incorporate Class II ECPs as agreed to by the contractor and the Government for classification. The contractor shall ensure that the incorporated ECOs and the associated PBL result in the MIDS JTRS Terminal configurations being in compliance with the current Functional Baseline (FBL) and Allocated Baseline (ABL) requirements for these Terminal configurations, and all other requirements applicable to these Terminal configurations, as specified elsewhere in the contract.

3.3.1.2.2 Designation of HWCIs and CSCIs

The contractor shall maintain the HWCIs and CSCIs designations.

3.3.1.2.3 Technical Evaluation of ECPs

The contractor shall evaluate all Class I and Class II ECPs for impacts to the safety, reliability, maintainability, Built-In-Test (BIT), Electromagnetic Interference/Electromagnetic Compatibility (EMI/EMC), EMC Features, environmental factors, telecommunications security, Software Communications Architecture (SCA) compliance, TEMPEST, and computer resource reserve capacity of the MIDS JTRS Terminal configurations, and for impacts to the Specialized Test Equipment (STE) and Acceptance Test Procedures (ATPs) used for the production and acceptance testing of the MIDS JTRS Terminal configurations. ECPs shall be designated Class I or Class II in accordance with Section 3.4.1.1 of this SOW and shall be processed accordingly. The contractor shall submit the results of these evaluations to the Government as part of the ECP approval process for Class I ECPs. The contractor shall incorporate into each ECP a regression test analysis section that provides the justification and details of the required regression testing. The Contractor shall provide support to the Joint Tactical Networking Center (JTNC) and its designated agencies in performing SCA-compliance testing for certification of the MIDS JTRS and its components and operating environment applications. The contractor shall ensure SCA v2.2

and JTRS Application Program Interface (API) Sets v1.9.1 and v1.12 certification is maintained. The Contractor shall demonstrate SCA compliance to the Government prior to delivering any updated MIDS JTRS end items to the Government.

3.3.1.2.3.1 Safety Evaluation

The contractor shall evaluate all proposed changes for any impacts to Terminal safety due to the resulting changes to the design of the MIDS JTRS Terminal configurations.

3.3.1.2.3.1.1 Hazardous Materials

Any additional hazardous material as defined in FED-STD-313 and not previously approved by the Government which may be used in, supplied with, or required in support of the MIDS JTRS Terminal configurations as a result of approving any ECP shall be approved by the Government. Prior to approval, the contractor shall update their Hazardous Material Summary Report and resubmit the updated report to the Government. This updated report shall identify all additional hazardous material and include justification for its use. Additionally, it shall include the necessity for the type, container size, and quantity of additional hazardous material (or material that results in additional hazardous waste) together with a listing of less hazardous potential substitutes that were considered and the reasons why these substitutes cannot be used. The order of precedence for acceptance shall be:

- a. Non-hazardous material
- b. Material that is recyclable
- c. Material that results in hazardous waste that can be treated to reduce it to a non-hazardous state.

The contractor shall submit updated Hazardous Material Summary Reports to the Government for review and approval as part of the ECP approval process. The submittal shall include a Material Safety Data sheet (MSDS) (ANSI Z400.1) for all additional material listed in the report. (CDRL A008)

3.3.1.2.3.2 Reliability Evaluation

The contractor shall evaluate all proposed changes for any impacts to Terminal reliability due to the resulting changes to the design of the MIDS JTRS Terminal configurations. The contractor shall evaluate the reliability impacts to predict the Mean Time Between Failure (MTBF) of the MIDS JTRS Terminal configurations. The contractor may use the operating environments as defined in table 3.2 of MIL-HDBK-217 to predict the reliability impacts that would result from approving the proposed changes. The contractor may use the procedures of MIL-HDBK-217, parts stress

analysis method, to predict the reliability impacts that would result from approving the proposed changes. If the contractor elects to use MIL-HDBK-217 and, in the contractors' judgment, the data in MIL-HDBK-217 is determined to be dated, incomplete, or otherwise inadequate, the contractor shall use additional sources, of the contractors' choosing, that, in the contractors' judgment, provide more accurate data for the prediction of reliability. The contractor shall identify these additional sources, which shall be approved by the Government. All trade studies shall consider reliability as an equally weighted performance parameter.

3.3.1.2.3.3 Maintainability Evaluation

The contractor shall evaluate all proposed changes for any impacts to Terminal maintainability due to the resulting changes to the design of the MIDS JTRS Terminal configurations. The contractor shall evaluate the maintainability impacts to predict the Mean Time to Repair (MTTR) of the MIDS JTRS Terminal configurations. The contractor may use the procedures delineated in procedure V of MIL-HDBK-472 to predict the maintainability impacts that would result from approving the proposed changes.

3.3.1.2.3.4 EMI/EMC Evaluation

The contractor shall evaluate all proposed changes for any impacts to Terminal EMI/EMC and EMC Features performance due to the resulting changes to the design of the MIDS JTRS Terminal configurations. The contractor shall ensure that the implementation of all approved changes shall not degrade the nine (9) EMC monitor performances of the MIDS JTRS Terminal configurations identified in the Functional & Periodic Verification of EMC Features ATP for the MIDS JTRS.

3.3.1.2.3.5 Telecommunications Security Evaluation

The contractor shall evaluate all proposed changes to the design of the MIDS JTRS Terminal configurations for any impacts that affect compliance with the Terminal telecommunications security requirements. The contractor shall ensure that the implementation of all approved changes shall comply with the telecommunication security requirements for the MIDS JTRS Terminal configurations. The contractor shall prepare and submit the National Security Agency (NSA) Questionnaire for ECPs, Attachment I, and the TEMPEST Assessment Form for ECPs, Attachment J, for each ECP and shall submit them with each ECP.

3.3.1.2.3.6 Computer Resource Reserve Capacity Evaluation

The contractor shall evaluate all proposed changes for any impacts to Terminal computer resource reserve capacity due to the resulting changes to the design of the MIDS JTRS Terminal configurations. The contractor shall ensure that the implementation of all approved changes shall not degrade the computer resource reserve capacity of the MIDS JTRS Terminal

configurations beyond the reduction of computer resource reserve capacity approved by the Government.

3.3.1.2.3.7 Special Test Equipment (STE) Evaluation

The contractor shall ensure all necessary STE is available to manufacture and deliver a NSA signed and encrypted MIDS JTRS terminal. The contractor shall ensure that any necessary changes to the STE/factory test equipment resulting from the implementation of all approved changes to the MIDS JTRS Terminal configurations are implemented in the STE/factory test equipment.

3.3.2 MIDS JTRS Technical and Interface Control Working Groups

3.3.2.1 MIDS JTRS Technical Working Group (TWG)

The contractor shall support a Government chaired MIDS JTRS TWG. The MIDS JTRS TWG serves as the forum that provides the communication link among the MIDS JTRS production and sustainment contractors, the Government, and MIDS JTRS integrators and users for resolving interface and technical issues, which are significant enough to require face-to-face meetings. These issues shall not be considered closed until all associated action items within the scope of the contract have been resolved to the Government's satisfaction.

3.3.2.1.1 MIDS JTRS TWG Meeting Support

The MIDS JTRS TWG shall be conducted semi-annually at the contractor's facility. The contractor shall participate and host all MIDS JTRS TWGs its or one of its subcontractor's facilities. For each MIDS JTRS TWG that the contractor hosts, the contractor shall provide both wired and wireless Internet connectivity to the attendees. Wired Internet connections shall be limited to no more than 25% of the attendees. A Web-based exchange ("WebEx") method and teleconference capability shall be provided by the contractor for each MIDS JTRS TWG. The MIDS JTRS TWG shall be a maximum of one (1) day in duration. The contractor shall provide presentation materials for all industry prepared materials, for each MIDS JTRS TWG meeting.

(CDRL A002)

3.3.2.2 MIDS JTRS Interface Control Working Group (ICWG)

The contractor shall support a Government chaired MIDS JTRS ICWG. The MIDS JTRS ICWG is charged with ensuring that proposed changes to the Functional and Allocated Baselines are physically, functionally, and electrically compatible and interoperable among the different MIDS JTRS variants, LRU and SRUs, contractors and host platforms. As such, the MIDS JTRS ICWG shall be a forum for the production, Systems Engineering and Integration (SE&I), and Software In-Service Support (SwISS) contractors to discuss technical issues concerning proposed

requirements changes to ensure that all contractors agree on the exact wording of the Notices of Revisions (NORs) prior to submittal to the Government. To this end:

- a. The contractor shall review and provide comments or concurrence with the wording of proposed requirements changes within 30 days after each proposed change has been made available to the ICWG forum, via MIDSvue;
- b. A MIDS Program Office designated technical lead will coordinate, monitor, and guide the contractors through the ECP/NOR development and review. The MIDS Program Office technical lead may invite specific platform representatives or integrators to the ICWG in order to resolve interface issues;
- c. After resolution of all technical issues and the contents of the accompanying NORs have been agreed upon, the designated lead contractor shall submit a formal ECP to the Government that includes estimated costs, schedule and implementation effectively for their respective contract, along with the associated NORs within 30 calendar days after ICWG agreement.

3.3.2.2.1 MIDS JTRS ICWG Meeting Support

A face-to-face MIDS JTRS ICWG shall be conducted semi-annually, in conjunction with the MIDS JTRS TWG, at the contractor's facility. The contractor shall also support weekly teleconference and on-line meeting service calls, where the contractor shall respond to any open actions and shall provide its status. The contractor shall participate in all MIDS JTRS ICWGs and shall host every face-to-face MIDS JTRS ICWG at its or one of its subcontractor's facilities. For each MIDS JTRS ICWG that the contractor hosts, the contractor shall provide both wired and wireless Internet connectivity to the attendees. Wired Internet connections shall be limited to no more than 25% of the attendees. A Web-based exchange ("WebEx") method and teleconference capability shall be provided by the contractor for each face-to-face MIDS JTRS ICWG it hosts. The face-to-face MIDS JTRS ICWG shall be a maximum of one (1) day in duration. The contractor shall provide presentation materials for all industry prepared materials, for each MIDS JTRS TWG meeting. (CDRL A002)

3.3.2.2.2 MIDS JTRS Problem Report Review (PRR)

A MIDS JTRS PRR shall be conducted semi-annually in conjunction with the MIDS JTRS TWG and MIDS JTRS ICWG. The contractor shall participate in all MIDS JTRS PRRs and shall host every MIDS JTRS PRR. For each MIDS JTRS PRR that the contractor hosts, the contractor shall provide both wired and wireless Internet connectivity to the attendees. Wired Internet connections shall be limited to no more than 25% of the attendees. A Web-based exchange ("WebEx") method and teleconference capability shall be provided by the contractor for each PRR it hosts. MIDS JTRS PRRs shall be a maximum of one (1) day in duration. The contractor shall provide presentation materials for all industry prepared materials, for each MIDS JTRS PRR. (CDRL A002)

3.3.3 Contractor Verifications

The contractor shall perform the necessary tasks to maintain the following verifications:

3.3.3.1 Interchangeability Verification

The contractor shall plan and conduct interchangeability regression verifications to verify compliance that the various MIDS JTRS configurations are interchangeable with each other. Any and all non-conformances to the requirements of interchangeability shall be documented in separate RFDs and submitted for Government approval and shall be noted on the individual Certificates of Compliance. The Contractor shall submit a separate Certificate of Compliance for each MIDS JTRS configuration (e.g. MIDS JTRS(5), MIDS JTRS (6), MIDS JTRS (7), MIDS JTRS (8)).

These certificates shall be delivered via contract letter after the contractor has successfully completed its contractor qualification effort. The certification must be submitted no later than 15 days prior to the contractor request for Government acceptance (via DD 250) of the first terminal for each configuration. The certificates shall be signed by an individual authorized to obligate the Contractor.

For Foreign Military Sales (FMS) terminals Only, the contractor shall submit a Certificate of Compliance, safety of flight certificate and a Declaration of Design and Performance (DDP) for each MIDS JTRS terminal.
(CDRL A00P, A00Q)

3.3.3.2 EMI Qualification Verification

The contractor shall conduct EMI regression verification to verify compliance of the EMI requirements of the MIDS JTRS terminal. The EMI regression verifications shall be conducted by a laboratory accredited to conduct MIL-STD-461 compliance verifications by the National Voluntary Laboratory Accreditation Program (NVLAP). All EMI regression verifications shall be under the guidance of National Association of Radio and Telecommunication Engineers (NARTE).

3.3.4 Contractor Approvals

The contractor shall perform the necessary tasks to maintain the following approvals:

3.3.4.1 Telecommunications Security Approval for Use

The contractor shall take all the actions and provide all the information required to comply with JTRS-UPA-022-06, TSRD No. 04-10 and C-M(55)15 and maintain Telecommunications Security Approval for Use. As part of this effort, the contractor shall plan and conduct regression verifications of the telecommunication functions of the MIDS JTRS Terminal as required by the TSRD No. 04-10.: The contractor shall coordinate the requirements for these telecommunications security regression

verifications with the applicable security authority. The contractor shall update documentation as directed by the NSA to achieve and maintain approval for use.

3.3.4.2 EMC Features Approval

The contractor shall take all the actions and provide all the information required to maintain EMC Features approval. As part of this effort, the contractor shall plan and conduct EMC Features regression verifications to verify MIDS JTRS Terminal compliance with the EMC features requirements of the FBL and DoD 4650.1-1R. The Navy Marine Corp Spectrum Center (NMSC) or its designated representative will witness any related retesting required to certify the EMC Features data. The contractor shall notify the MPO at least 60 days prior to conducting any related retesting.

3.3.4.3 Air Worthiness Certification

The Contractor shall certify that the delivered Terminals are safe for intended use. The certificate shall be based on successful completion of Contractor testing and analysis. Safe-For-Intended Use (SFIU) tests shall consist of (1) Crash Safety, (2) Random Vibration, (3) RE102 radiated emissions, electrical field, 10 kHz to 18 GHz, (4) CE102 conducted emissions, power leads, 10 kHz to 10 MHz, and (5) RS103 radiated susceptibility, electric field, 2 MHz to 40 GHz.

The Contractor shall provide a completed AFMC Form 3, Component Airworthiness Certificate, prior to First Article Approval. The AFMC Form 3 is considered "completed" once the contractor has completed the necessary testing and analysis and the responsible contractor system safety engineer/officer/ manager has signed the form. The Government expects to review the test data and analyses upon which the Contractor based the airworthiness certificate.

The Contractor shall maintain the Terminal's airworthiness certificate until the period of performance for the entire contract is completed.

3.3.4.4 Stage 4 DD-1494 Certification

The Contractor shall provide the necessary Stage 4 Terminal measured data and information required for incorporation into the DD-1494. The required data shall be submitted to the Program Office via the DoD Certification Authority, currently designated as the Program Executive Office (PEO) Command, Control, Communications, Computers and Information (C4I).

3.4 Configuration and Data Management

3.4.1 Configuration Management

The contractor shall identify a single Point of Contact (POC) within its organization who shall be responsible and have authority for all configuration management and control. Configuration management shall be in accordance with the MIDS JTRS Configuration

and Data Management Plan (CDMP) and the Government approved Joint Contractor Configuration Management Plan (CMP).

The Government reserves the right to require the Contractor to re-qualify his product if either of the following occurs:

(1) The Contractor has modified its product, or changed the material or its manufacturing processes such that, in the opinion of the Government, the validity of the previous qualification is questionable. Any expenses incurred by the Contractor associated with re-qualification in these instances (including but not limited to regressive testing) shall be borne by the Contractor.

(2) It is otherwise necessary to determine that the quality of the product is maintained in conformance with the specification. Any costs incurred by the Contractor associated with re-qualification in this instance (including but not limited to regressive testing) shall be negotiated between the Government and the Contractor.

3.4.1.1 Engineering Change Proposals

The contractor shall prepare proposed changes as ECPs in accordance with section 5.3 of SAE EIA-649C and using GEIA-HB-649A for guidance.
(CDRL A009)

3.4.1.2 Notices of Revision

The contractor shall submit NORs for all proposed changes to FBL and ABL documents under Government configuration control with the ECP that proposes the change. The NORs shall delineate the "From:" and "To:" content for each document. For clarity purposes, an additional markup shall be required using strikethrough for removing text and bold text for additions. The contractor shall use GEIA-HB-649A for guidance on NOR preparation.
(CDRL A00A)

3.4.1.3 Regression Verification

For all Class I PBL ECPs, the contractor shall determine the impact on its system qualification requirements and shall develop a Regression Verification Procedure (RVP) to define the necessary analysis and testing to ensure the new configuration meets all qualification requirements. Requirements in Temperature/Altitude, Random Vibration (endurance), Gunfire Vibration, Crash Safety, Explosive Atmosphere, EMI, and Electrical Power are Safety of Flight requirements and their verification is mandatory. Requirements in interchangeability, including vendor-to-vendor interchangeability and their verification, are also mandatory. Verification may be accomplished either by test, analysis or a combination of both methods. The RVP shall include the detailed procedures for any testing required and the details of any analyses to be performed, and the details for any combination thereof. The contractor shall additionally include a table that depicts: (a) the requirements in the FBL to be verified as a part of the regression verification, (b) the original verification methods

used during the First Article Qualification Test (FAQT) conducted under Phase 2B, (c) the regression verification method to be used, and (d) the rationale for the regression verification method to be used if it is different than that used during the FAQT. The contractor shall submit the RVP to the Government for approval concurrently with the Class I PBL ECP. The contractor's analysis of the required regression testing shall follow the guidance used in qualifying the terminal. The contractor shall not proceed with regression verification without prior approval from the Government. The contractor shall submit a Regression Verification Report (RVR) to the Government, upon completion of regression verification conducted in accordance with the Government approved RVP. The RVR shall include the results of all tests conducted and analyses performed. Any failures shall require corrective action and retesting by the contractor. All regression testing and analyses, based on a Government approved RVP, shall be successfully completed before delivering an RVR to the Government.
(CDRL A00B, A00C)

3.4.1.4 Requests for Deviation (RFD)

The contractor shall submit RFDs that fully document all non-compliances with the FBL and ABL for all Configuration Items (CIs) delivered to and approved by the Government. Each non-compliance shall be submitted as a separate RFD. For RFDs that the Government does not approve, the contractor shall correct the non-compliance. All non-compliances with the approved PBL, for CIs delivered to the Government, shall be submitted to and approved by any participating MIDS JTRS contractor(s), and shall further be submitted to the Government for concurrence of classification. The contractor shall use GEIA-HB-649A for guidance on RFD classification and content.
(CDRL A00D)

3.4.1.5 Interface Control

The contractor shall comply with the requirements of SAE EIA-649C for identifying and defining the functional and physical external, internal, and installation interfaces.

3.4.1.6 Configuration Status Accounting

3.4.1.6.1 Configuration Management Accounting Report (CMAR)

The contractor shall develop a CMAR that meets the requirements of section 5.4 of SAE EIA-649C and using GEIA-HB-649A for guidance. The contractor's CMAR shall include such items as ECPs, deviations, conditional acceptance terms, and software definition for the as-built configurations. Additionally, the contractor shall include an equipment tree drawing that documents all approved part number changes to a configuration item and that lists the version numbers for all CSCIs and the changes thereto. The initial delivery of the CMAR shall include top-level assembly drawings and associated parts lists for each HWCI. Subsequent deliveries of the CMAR shall include updated top-level assembly

drawings and associated parts lists for each HWCI for which these drawings or parts lists have changed since their prior submittal.
(CDRL A00E)

3.4.1.6.2 Configuration Data Information

The contractor shall document the as-built configuration of each HWCI delivered to the Government. The documentation shall include hardware, software, and firmware and shall accompany each HWCI delivery.
(CDRL A00F)

3.4.2 Data Management

The contractor shall identify a POC within the organization for data management efforts. (This person may be the same as the Configuration Management POC). The contractor's Data Management team shall possess a thorough understanding of current data management techniques. The contractor shall work with the Government to resolve all computer related compatibility issues. The contractor shall be responsible for obtaining and maintaining any Public Key Infrastructure (PKI) certificates necessary to access the Government maintained data management systems.

3.4.2.1 Contract Data Requirements

The contractor shall provide electronic copies of all data deliverables. Data deliverables shall not include embedded files. The contractor shall utilize the Government maintained data management systems for delivery of all CDRL items. All data shall additionally be submitted in a universal viewer format (e.g. html, pdf, tif). The contractor shall provide the native format data (preferably Microsoft Office Suite) to the Government upon request at no additional cost and as required by the CDRL.

3.4.2.2 Data Accession List

All documentation produced or prepared by the contractor or its subcontractors under this contract shall be accessible to the Government. The Data Accession List is a complete listing of all data, computer software and documentation generated by the contractor for use during the course of performing or fulfilling the contract requirements herein. The contractor shall prepare and update quarterly a Data Accession List for all data, software and documentation generated. This list shall be provided to the Government. At all times, throughout the life of the contract, the contractor shall provide Government personnel full access to this documentation including providing copies to the Government, as requested.
(CDRL A00G)

3.5 Logistics

3.5.1 Integrated Logistics Support (ILS)

The contractor shall establish and maintain an ILS Program to support the MIDS JTRS Terminal. The contractor shall identify an ILS Manager (ILSM) to manage the ILS

Program. The contractor's ILSM shall be the principal logistics point of contact for all ILS requirements. The contractor shall establish procedures for an ILS Program to support the Terminal, LRUs and SRUs produced under this order. The contractor shall ensure that maintenance planning, supply support, technical data, support and test equipment, training, software support, facilities, manpower and personnel, packaging/handling, storage and transportation, design interface, pre-operational support, reliability and maintainability, testability, availability, human factors and system safety efforts are integrated into a total ILS Program. The ILSM shall ensure the data contained within the Contractor Database is accurate and current within one (1) working day. The contractor shall ensure that supportability considerations and supportability planning are integrated in the system/equipment engineering and design process to obtain optimum cost effectiveness and maximum support readiness. The contractor shall support a weekly depot status call and provide a report of LRUs and SRUs in depot status.

3.5.1.1 Joint Logistics Working Group (JLWG) Support

The contractor shall support the MIDS JTRS JLWG with representatives from all functional disciplines representative of the current program. The JLWG shall be the primary forum for the logistics support of all MIDS JTRS product lines. MIDS JTRS JLWG meetings will be scheduled and hosted semiannually by the Government, or at contractor's facility, and shall not exceed three days. The contractor shall attend and support the MIDS JTRS JLWG.

3.5.2 Commercial Asset Visibility (CAV)

The contractor shall provide asset reporting using CAV software to facilitate visibility of U.S. and Foreign Government owned assets being repaired at commercial contracted facilities. Updates to the CAV are to occur within one (1) working day.

3.5.3 Wholesale Asset Inventory Facilities

3.5.3.1 Wholesale Assets

Government owned spares (SRUs and/or LRUs) used by the original equipment manufacturer (OEM) to support repair turn-around time shall be stored in secure storage at the contractor's facility. The contractor shall maintain accurate wholesale asset inventory, status, and usage accountability as part of the Contractor Database established by Section 3.5.4.

3.5.3.1.1 MIDS JTRS LRUs

- a. Receiver Transmitter (RT) – RT-1925(C)(U)
- b. Receiver Transmitter (RT) – RT-1957(C)(U)
- c. Receiver Transmitter (RT) – RT-2031(C)(U)
- d. Receiver Transmitter (RT) – RT-2037(C)/(U)
- e. Receiver Transmitter (RT) – RT-2047(C)/(U)
- f. Power Supply (PS) – PP-8559A/U
- g. TTNT External Power Amplifier – TEPA AM-7681/U
- h. TTNT High Power Amplifier – THPA AM-7682/U

- i. Remote Radio Frequency Unit - RRFU AM-7683/U

3.5.3.1.2 MIDS JTRS SRUs

- a. Chassis –
- b. Red I/O Processor
- c. TACAN/Black Core Processor (BCP) (TACAN/BCP)
- d. Cryptographic Subsystem (CSS)/Protected Core Processor (PCP) (CSS/PCP) (NEW)
- e. Link 16 Transceiver
- f. 2-2000 MHz Transceiver Blank-off Plate
- g. Internal Power Supply (IPS) (-11 version)
- h. Radio Frequency Amplifier (RFA)
- i. IFFT Transceiver
- j. Back Panel
- k. TTNT Transceiver

3.5.3.2 Depot Repair Piece Parts

The contractor shall determine, procure and control piece parts and lay-in spares that are required for the repair of Terminals, LRUs and SRUs at the depot consistent with meeting the repair Turn Around Time (TAT) requirement of 45 days. Depot repair piece parts shall be contractor owned. The contractor shall provide all Special Testing Equipment (STE), qualified personnel, necessary depot repair facilities and any other general repair equipment necessary to meet the repair TAT in accordance with Clause H-12 of the contract.

3.5.4 Contractor Database

The contractor shall develop and maintain a Contractor Database fully accessible by U.S. Government personnel via the internet in real time that provides a single, consolidated repository of production and repair information for all contractor-produced MIDS JTRS hardware (terminals, LRUs and SRUs). The Database shall provide accurate and timely (posted within one working day) reporting of terminal, LRU and SRU configuration, reliability, and maintainability data for all MIDS related hardware received by the contractor (including their subcontractors) for repair, retrofit, or refurbishment, regardless of the contract or order under which the items were purchased. Contractor depot repairs and/or upgrade activity reporting shall begin in the database No Later Than (NLT) one working day after repair items are received. Results of field repair and/or upgrade activities shall be captured and reported in the database NLT one working day after item receipt and after each step in the repair process and within one working day of item completion. The database shall be accessible to the Government via the Internet and shall provide the Government with real-time status for all related information to include: raw data tables, forms, queries and reports. The database shall provide the ability to generate ad-hoc reports for all data elements captured in the database as identified in Attachment S. Required data fields in Attachment S shall take precedence over any other request or required data fields previously provided. The contractor will assist MPO in creation of repeatable reports upon request for assistance by U.S. Government

representatives. The contractor shall present at each PMR MIDS configuration, asset availability, maintainability and reliability data.

The contractor's database shall at a minimum capture and have the capability to report the elements in Attachment S in real time (posted within one working day) and on demand. The contractor will provide a common database user interface format as defined in Appendix B. All data fields must be available for generation of a single report generated from the database.

3.5.5 Cataloging/Codification

The contractor shall provide data, as necessary, for the assignment of stock numbers for the LRUs and SRUs comprising the MIDS JTRS Terminal. For the assignment of stock numbers, the contractor shall provide top-level assembly drawings for each LRU and SRU that require stock numbers that contain, at a minimum, the following:

- a. Drawing title;
- b. Drawing number;
- c. Picture of the item;
- d. Part number with suffix or dash number;
- e. Revision letter;
- f. Contract number;
- g. Contractor name and address;
- h. Commercial and Government Entity (CAGE) code;
- i. Appropriate marking of data rights;
- j. Next higher assembly or used on information; and,
- k. Physical characteristics (length, width, height, weight).

3.6 Manufacturing and Acceptance Verification

3.6.1 Manufacturing

The contractor shall fabricate MIDS JTRS Terminals and spare LRUs and SRUs. The contractor shall fabricate all MIDS JTRS Terminals and all spare LRUs and SRUs using qualified production and quality assurance processes, and environments in accordance with the IPC and ISO standards noted in Section 2.1. All MIDS JTRS Terminals and spare LRUs and SRUs shall be fabricated in accordance with Class three (3) workmanship standards per the ANSI/J and IPC standards provided in Section 2.1. The contractor shall have documented subcontractor control processes. The contractor shall notify the Government of any subcontractor or supplier base changes prior to implementation of any such changes. Should such a change be processed, the Government may require the contractor to perform. All the requirements of 3.6.1 shall be flowed to subcontractors.

3.6.1.1 Part Control Program

The contractor shall have a parts qualification system to ensure the reliability and quality of basic system piece parts entering the manufacturing process. The intent is

to start the manufacturing process with reliable piece parts by both validating vendor assessments of part reliability and quality. The contractor shall obtain Government approval for the use of all up-screened parts. Any part operated outside the standard manufacturer's published data sheet shall be considered up-screened. In addition, the contractor shall control and prohibit use of counterfeit parts and material. The contractor shall at a minimum:

- a. Flow down requirements to subcontractors;
- b. Address application and derating criteria during component selection;
- c. Conduct receiving inspection;
- d. Maintain yield records on suppliers; and,
- e. Screen all custom components that are determined to be critical (e.g. Application Specific Integrated Circuit (ASIC)), and provide the list of critical parts to the MPO.

3.6.1.2 Production Controls

The contractor shall employ robust production controls to ensure repeatability and product producibility, reliability, and maintainability. The contractor shall ensure production controls include the following, at a minimum:

- a. Manufacturing drawings do not contain redlines;
- b. In-process inspections throughout the manufacturing and rework cycle;
- c. Processes and materials are fully documented with the design captured in the Material Requirements Planning (MRP) system and released to production;
- d. Assembly documentation and instructions are complete and released to the production floor;
- e. The workforce has all appropriate certifications to perform their jobs (e.g., soldering, etc.);
- f. A qualified design, including software;
- g. Baking of Ball Grid Array (BGAs) and printed wiring boards to remove moisture;
- h. X-Raying all BGAs;
- i. Use of parts with a Moisture Sensitivity Level (MSL) of > 5 ;
- j. Having manufacturing facilities to control moisture levels;
- k. Prohibiting the use of lead free solder and pure tin finishes on any part (except as per a Government approved tin whiskers mitigation plan);
- l. Use of Rosin Mildly Activated (RMA) flux and cleaning for all board repairs;
- m. Having zero "dead bugs" on all production circuit boards;
- n. Established best manufacturing practices in regards to "white wires" on all production circuit boards;
- o. Conformance with ANSI/J-STD-001;
- p. Conformance with IPC-A-600;
- q. Conformance with IPC-A-610;
- r. Conformance with IPC-7711-21B;
- s. One hundred percent (100%) visual inspection of all Circuit Card Assemblies

- (CCAs); and,
- t. Conduct acceptance testing in accordance with approved Government procedures.

3.6.1.3 Manufacturing Program Planning

The contractor shall perform manufacturing planning throughout the program to assure early risk identification and resolution.

3.6.1.4 Manufacturing Surveillance

The contractor shall maintain an effective, timely, and responsive manufacturing surveillance operation. As part of the manufacturing surveillance operation, the contractor shall collect data (metrics) sufficient to track the following metrics as applicable to the individual contractor's production line:

- a. SRU work in inventory;
- b. SRU and LRU first time test yields;
- c. LRU SRU ATP and ESS;
- d. Failure types by SRU;
- e. Failure types e.g., component, workmanship, equipment;
- f. Failure cycle;
- g. Total ESS cycles or test attempts to pass by serial number;
- h. Percent LRU and SRU defect free;
- i. Average number of failures during ESS and ATP per terminal;
- j. Terminal delivery schedule line of balance; and
- k. Number of reworks by classification and department.

The contractor shall report the status and results of the manufacturing surveillance operation including the above listed metrics monthly. The contractor shall make recommendations, to the Government for approval, for metrics tracked to better meet overall program needs. The contractor shall prepare and submit the report of the status and results of the manufacturing surveillance operation.

(CDRL A00H)

3.6.1.5 Tin Whisker Mitigation

As part of the manufacturing program, the contractor shall restrict the use of pure tin finished parts. When the use of pure tin finish cannot be avoided, the contractor shall comply with the MIDS JTRS FP&F Government approved Tin Whisker Mitigation Plan.

3.6.1.6 Manufacturing Operations Management

3.6.1.6.1 Work Management System

The contractor shall provide the Government with access to the documentation, data, and reports generated by any existing work measurement system applied to production.

3.6.1.6.2 Telecommunications Security Production Assurance

The contractor shall maintain a Security Production Assurance (SPA) program to ensure the security integrity as required by the TSRD No. 4-10. The contractor shall coordinate the requirements for the SPA program with the NSA.

3.6.1.6.3 Failure Reporting and Corrective Action System (FRACAS)

The contractor shall implement a disciplined FRACAS. The system shall be maintained for reporting and analysis of all failures and faults for both hardware and software. The system shall do this to the extent necessary that failure causes are understood, and positive corrective actions are identified, implemented and verified to prevent further recurrence of the failures. Records shall be maintained for all reported failures, failure investigations and analyses, assignable failure causes, corrective actions taken, and effectiveness of corrective actions for all receiving inspections, in process manufacturing, acceptance tests (including ESS), qualification tests, and field failures returned to the factory. Failure records shall be maintained in the Contractor Database and reported during PMRs. (CDRL A00J)

3.6.1.6.3.1 Failure Review Board (FRB)

The contractor shall establish an FRB to review failure trends, corrective action status, and to assure adequate corrective actions are taken. The personnel appointed by the contractor to act on the FRB and the scope or extent of their authority shall be documented in the FRACAS procedures. The FRB shall meet on a regular basis to review failure data from appropriate inspections and tests.

3.6.1.6.4 COMSEC Inventory Report

For MIDS Terminals produced or repaired for U.S. requirements, the Contractor shall ensure that all COMSEC portions of MIDS Terminals are manufactured, integrated and delivered in the U.S. only by a U.S. contractor holding a U.S. COMSEC account. Once the COMSEC portions of the MIDS Terminals are integrated, the MIDS Terminals shall not leave the custody of that U.S. contractor prior to delivery.

The COMSEC Manager shall provide a monthly COMSEC Inventory Report for their account. At a minimum, the report shall document all MIDS JTRS products by Short Title (RT-1957, RT-2031, Z-BAS, etc.), Serial Number, Accountability Legend Code, and physical location and/or sub-custody holder. (CDRL A00N)

3.6.2 Acceptance Tests

The contractor shall conduct acceptance tests on all Terminals, LRUs and SRUs to be delivered to the Government, in accordance with Government approved ATPs.

Acceptance tests shall include both functional and ESS tests with the version of software

to be delivered. If the software component requires encryption and NSA signature to meet TSRD No. 04-10 requirements, the contractor shall perform the acceptance tests with the encrypted and NSA-signed executable software files installed. The contractor shall use the ESS environmental profile as specified in SS-J-10001. Functional test requirements shall be derived from the requirements established in the FBL and ABL specifications. The contractor shall update the Terminal, LRU and SRU ATPs, as necessary, when these requirements change as a result of a Government approved ECP. Updated ATPs shall be submitted to the Government for approval and shall be approved by the Government prior to their use to conduct acceptance testing. The contractor shall maintain all results from each acceptance test conducted in an Acceptance Test Report (ATR). ATRs shall be provided upon Government request.
(CDRL A00K)

3.6.2.1 EMC Features Verification

The Contractor is required to obtain EMC Features approval in accordance with the DoD Link 16 EMC Features Certification Process and Requirements prior to First Article Approval and to maintain such approval until the period of performance for the entire contract is completed. Any waivers or deviations against the DoD Link 16 EMC Features Certification Process and Requirements shall be submitted to National Telecommunications and Information Administration (NTIA) via the DoD Certification Authority for approval. The certification effort may require technical interchange meetings with the DoD Certification Authority, currently designated as Naval Information Warfare Systems Command (NAVWAR) 5.0, or with members of their designated EMC Features Certification execution activity. Accordingly, it is the sole responsibility of the Contractor to determine and to provide all information, briefings, test procedures, test conduct, test reports and analysis that may be required to document and obtain certification from the DoD Certification Authority and final EMC Features approval from NTIA. It is the contractor's responsibility to maintain EMC Features certification.

The contractor shall measure and record the following elements as a part of the terminal ATR:

- a. The actual values of the threshold setting of the Low Level Detector (LLD);
- b. The actual value of the peak terminal output power in the three power modes;
- c. A full band spectrum plot; and
- d. The individual pulse spectra at nine (9) frequencies (969, 990, 1008, 1053, 1065, 1113, 1146, 1176 and 1206 MHz) at 200 Watts.

3.6.2.2 Spare SRU EMC Features Verification

As part of the contractor's overall acceptance test program and before delivery of each spare RFA SRU, the contractor shall perform the necessary actions to ensure verification of the RFA SRUs EMC features. The contractor shall measure and record the following elements as a part of the RFA SRU ATR:

- a. The actual values of the threshold setting of the LLD;

- b. The actual value of the peak terminal output power in the three power modes;
- c. A full band spectrum plot; and
- d. The individual pulse spectra at nine (9) frequencies (969, 990, 1008, 1053, 1065, 1113, 1146, 1176 and 1206 MHz) at 200 Watts.

3.6.2.3 Electromagnetic Interference Periodic Verification

Once every quarter, the contractor shall conduct the RS103 test method in accordance with MIL-STD-461 on one Terminal to be delivered to the Government in order to verify compliance with EMI requirements. The contractor shall provide a notification to the Government at least two (2) weeks prior to the actual test event to allow the Government sufficient time to make arrangements to witness the test, at the discretion of the Government. The contractor shall record and provide the results of the test as a part of the ATR for each terminal tested.

3.7 Quality Assurance (QA)

3.7.1 Quality Assurance Program

The contractor shall implement a quality assurance program to monitor manufacturing and procurement processes (e.g. material change, technology insertion, redesign, etc.), including acceptance testing in accordance with International Standards Organization (ISO) 9001 as supplemented by AQAP-2110, AQAP-2120, AQAP-2130 and AQAP 2210. Quality manufacturing and procurement assurance processes shall be maintained in such a way as to assure that quality components and products are being produced in a consistent manner. As part of the quality manufacturing process, the contractor shall identify and resolve potential product failure modes caused by manufacturing or assembly process deficiencies. The goal is to continuously improve first-pass yields. The quality assurance program shall:

- a. Achieve and maintain high repeatability in the production and depot repair lines;
- b. Achieve and maintain low variability in the production and depot repair lines; and,
- c. Ensure that best commercial practices and policies are in place and there is capability to audit that these practices and policies are being followed.

3.7.1.1 Stipulations

The following stipulations apply:

- a. The contractor shall apply the quality standards and specifications to the following:
 - i. All internal management processes;
 - ii. All manufacturing processes;
 - iii. All procurement processes;
 - iv. Process improvement practices;
 - v. Product development;
 - vi. Acceptance testing, procedures and reporting; and,

- vii. Terminal, LRU and SRU specifications compliance and related requests for deviation.
- b. The contractor shall make available for review, and retention if required by the Government, all records associated with the establishment, implementation, and operation of a quality system compliant with the documents listed above;
- c. The contractor shall monitor the preparation, maintenance, and compliance with work and inspection instructions as a function of the quality program;
- d. The contractor shall make available for review and retain all records associated with the establishment, implementation and operation of its quality program. The quality trends data maintained and briefed by the contractor during program reviews shall include, at a minimum, the number of scraps, number of re-work dispositions, hours of re-work, number of repair dispositions, hours of repair, contractor benchmarks and quality metrics; and,
- e. The contractor shall demonstrate, in detail, at each PMR how:
 - i. Benchmarks and metrics are established and controlled to ensure repeatable results;
 - ii. At regular intervals, that processes used will produce or are producing terminals with low variability; and,
 - iii. Internal QA processes meet all applicable Government requirements stated elsewhere in this contract.

3.7.2 Calibration Systems

The contractor shall maintain a calibration system in accordance with ISO 10012-1 and shall develop and maintain a written description of its calibration system covering measuring and test equipment standards.

3.7.3 Corrective Action and Disposition System

The contractor shall maintain a corrective action and disposition system for nonconforming material in accordance with ISO 9001 as supplemented by AQAP-2110, AQAP-2120, AQAP-2130 and AQAP-2210.

3.7.4 Subcontractor Quality

The contractor shall ensure all QA requirements herein are passed to its subcontractors.

3.7.5 Internal QA Audits

The contractor shall conduct periodic internal QA audits on critical manufacturing processes that include, at a minimum, process improvements and process efficiency. Results shall be reported at each PMR.

3.8 Government Furnished Property

3.8.1 Government Furnished Property (GFP) Reporting

The contractor shall conduct monthly audits of all GFP on contract and submit updates to the Attachment N, as new GFP is received from the Government.
(CDRL A00L)

4.0 DATA DELIVERABLES

CDRL	Title	Frequency
A001	Conference Agenda	Draft due NLT than 15 working days prior to start of each meeting. Final due NLT 5 DARGC.
A002	Presentation Materials	Hard copies of all materials presented at each meeting shall be provided for 10 Government attendees. 20 soft copies of all materials shall be provided at each meeting. Presentation shall be posted to MIDSvue 5 days prior to meeting.
A003	Conference Minutes	One time per meeting.
A004	Cost and Hour Report (FlexFile)	Submission due to DCARC in accordance with CSDR Plan
A005	Quantity Data Report	Submission due to DCARC in accordance with CSDR Plan
A006	Contractor Business Data Report (DD Form 1921-3)	Submission due to DCARC in accordance with CSDR Plan
A008	Hazardous Material Summary Report	As required. Draft report shall be submitted for all hazardous materials within 15 days from when they are identified. Government comments within 45 days. Final due 30 DARGC.
A009	Engineering Change Proposal	As required. Final is due within 30 DARGC.
A00A	Notice of Revision	Submitted in conjunction with each ECP (CDRL A009)
A00B	Regression Verification Procedure	Draft is due at least 60 days prior to start of verification along with the applicable ECP. Final is due within 15 DARGC.
A00C	Regression Verification Report	Due NLT 30 days after completion of each regression verification conducted.
A00D	Request for Deviation	As required for each non-conformance, final is due within 30 DARGC.
A00E	Configuration Management Accounting Report	Due at end of first full calendar year ARO. Subsequent submission due within 10 days of update.
A00F	As-Built Configuration List	Due NLT 10 days after acceptance of each HWCI delivered to the Government.
A00G	Data Accession List	Due at end of first full calendar year ARO. Subsequent submission due within 10 days of update.
A00H	Metrics Report	Due monthly.
A00J	Failure Reporting and Corrective Action Report	Due bi-monthly.
A00K	Acceptance Test Procedure	As required. Government comments within 45 days. Final due 30 DARGC.
A00L	GFP Monthly Status Report	Updates are required as new GFP is provided by the Government
A00N	COMSEC Inventory Report	Due monthly, within 5 business days of beginning of month
A00P	FMS Certificate of Compliance and Safety of Flight Certificate	FMS Terminals ONLY: Due with each FMS Terminal delivery
A00Q	Declaration of Design and Performance	FMS Terminals ONLY: Due with each FMS Terminal delivery

APPENDIX A

PROGRAM MANAGEMENT REVIEWS

1.0 Scope

This appendix defines the program status information to be reported at the PMRs.

2.0 General

Each PMR shall be a formal management review of the contractor's overall MIDS JTRS production efforts.

3.0 Items to be Reviewed

The contractor shall present the following for review:

3.1 Program Status:

- a. Program Overview
- b. Summary of action items from all formal meetings and reviews;
- c. The contractor's risk assessment;
- d. The contractor's schedule and status;
- e. Contract status and actions;
- f. Proposal status;
- g. Letter response status; and,
- h. Production delivery status.

3.2 Engineering Support Status:

- a. Systems Engineering Status,
- b. TWG Status,
- c. ICWG Status,
- d. JPR status; and,
- e. Verifications and Approvals status.

3.3 Configuration and Data Management Status:

- a. ECP status;
- b. RFD status;
- c. RVP/RVR status;
- d. CDRL status; and,
- e. Data Accession List

3.4 Logistics Status:

- a. TAT status;
- b. Spares inventory status;
- c. LRU and SRU failure status and analysis;
- d. LRU and SRU depot repair Work In Process;

- e. Corrective action status;
- f. Contractor database status and review;
- g. Cataloging status, and,
- h. Maintenance planning;
- i. Parts Obsolescence;
- j. Configuration, availability, maintainability and reliability of MIDS JTRS Terminals.

3.5 Manufacturing and QA Status:

- a. Part control status;
- b. Production controls status and effectiveness;
- c. Defect controls status, results and analysis;
- d. Manufacturing program planning status and metrics;
- e. Manufacturing surveillance;
- f. Manufacturing operations management status;
- g. FRACAS status;
- h. ATP status;
- i. EMC Features periodic verification status and analysis;
- j. EMI periodic verification status and analysis;
- k. ESS Effectiveness ;
- l. Acceptance and factory test equipment status and reporting;
- m. STE; and,
- n. QA audit reporting.

APPENDIX B

CONTRACTOR DATABASE INSTRUCTIONS

1. User interface format

A. User Setup Profile

- Standard Fields required to establish a User profile to log into the system shall minimally include:
 - Employee Type (Civilian Government, Contract Support, or Military)
 - Name (Last, First)
 - Email
 - Telephone (If applicable)
 - Country
 - Employing Activity (Organization or Company Name)
 - Support Contractor Contract Number (if applicable)
 - Support Contractor Contract Expiration Date (if applicable)
 - Request Type (New Account or Account Re-verification)
 - Government Sponsor (If Contractor)
 - Reason for Request
- Shall include list of Platforms that the User can request Access to which will be derived from platform types listed in Form DD250s.
 - User can select multiple platform types
 - Each requested field is approvable by the Government
- Shall include list of User notifications as identified below in Section 2 in which the user can select which notifications they would like to receive

B. Login Screen

- Shall enable User system login by entering Username and Password
- Shall provide User with a means to request Password Reset

C. User Input Screen(s) Generated for Initial Hardware Return(s):

Input Field	System, Contractor, or User Generated
Reason For Return (Repair or Retrofit)	User or Contractor
Field, Depot Repair, or Retrofit	User or Contractor
Reported failure indication from customer, Detailed	User or Contractor
Returning Platform	User or Contractor
Activity	User or Contractor
Organization Code or Unit Identifier	User or Contractor
Country	User or Contractor
Service Affiliation	User or Contractor
Asset Part Number	User or Contractor
Asset Serial number	User or Contractor
Date of Submission	System
System Tracking Number (STN) (For LRU or SRU inducted at the OEM)	System
System Tracking Code (STC) (For LRU or SRU inducted at the OEM)	System
Government or Commerical Transportation Method of Shipment	User
Government or Commerical Transportation Carrier Shipping Tracking Number	User
Date Import/Export Notified of Incoming Shipment (FMS Only)	System
Contractor Import Personnel Notified (FMS Only)	System

All Users shall input the required fields listed above to generate a notice to the Contractor that an asset has been submitted for return.

D. User Input Screen for Ad Hoc Reports

User input screen for ad hoc reports shall include any field(s) listed in Appendix A with any qualifiers listed in Appendix A (maximizing the use of pull down menus).

2. Automatic User Selectable Notification Fields (As Applicable)

A. U.S. Asset User Notifications for Repair Only:

- Receipt at Depot
- Non-warranty repair funding needed (As required)
- Asset Induction Date
- Incoming Test Date
- Incoming Test Result
- Additional Repair funding needed (as required)
- Repair Completion Date
- Test Entry Date
- Final Test Passed Date
- Date Sent to Shipping
- Ship Date with Commercial Transportation Carrier ID and associated shipping Tracking Number

B. U.S. Asset User Notifications for Retrofit Only:

- Receipt at Depot
- Retrofit funding needed (As required)
- Asset Induction Date
- Incoming Test Date
- Incoming Test Result
- Repair Needed notification date with System generated Repair Tracking Number
- Additional Repair funding needed (as required)
- Repair Completion Date (as required)
- Date re-submitted for Retrofit
- Retrofit Completion Date
- Test Entry Date
- Final Test Passed Date
- Date Sent to Shipping
- Ship Date with Commercial Transportation Carrier ID and associated shipping Tracking Number

C. Foreign Asset User Notifications for Repair Only:

- Incoming FMS Asset requiring OEM Import Personnel Action
- Receipt at Depot
- Non-warranty repair funding needed (As required)
- Asset Induction Date
- Incoming Test Date

- Incoming Test Result
- Additional Repair funding needed (as required)
- Repair Completion Date
- Test Entry Date
- Final Test Passed Date
- Date Sent to Shipping
- Outgoing FMS Asset requiring OEM Export Personnel Action
- Ship Date with Commercial Transportation Carrier ID and associated shipping Tracking Number

D. Foreign Asset User Notifications for Retrofit Only:

- Incoming FMS Asset requiring OEM Import Personnel Action
- Receipt at Depot
- Retrofit funding needed (As required)
- Asset Induction Date
- Incoming Test Date
- Incoming Test Result
- Repair Needed notification date with System generated Repair Tracking Number
- Additional Repair funding needed (as required)
- Repair Completion Date (as required)
- Date re-submitted for Retrofit
- Retrofit Completion Date
- Test Entry Date
- Final Test Passed Date
- Date Sent to Shipping
- Outgoing FMS Asset requiring OEM Export Personnel Action
- Ship Date with Commercial Transportation Carrier ID and associated shipping Tracking Number